

1

PIVOTING TIBIAL TRAY**CROSS-REFERENCE TO RELATED APPLICATIONS**

This application is a continuation of U.S. patent application Ser. No. 13/087,479 filed on Apr. 15, 2011, and issued on Nov. 26, 2013 as U.S. Pat. No. 8,591,593, the entire disclosure of which is incorporated herein by reference.

FIELD

The present disclosure relates to a knee joint prosthesis including a tibial tray component having independent and selectively attachable bearings, the tibial tray including a medial tray portion and a lateral tray portion that are independently pivotal around axes that extend generally in a medial/lateral direction.

BACKGROUND

This section provides background information related to the present disclosure which is not necessarily prior art.

A knee joint prosthesis can generally comprise a femoral component and a tibial component. The femoral component and the tibial component can be designed to be surgically attached to the distal end of the femur and the proximal end of the tibia, respectively. The femoral component can further be designed to cooperate with the tibial component in simulating the articulating motion of an anatomical knee joint. In many examples, the tibial component can further include a bearing component that includes articulation surfaces on the medial and lateral side for cooperating with a medial and lateral condyle portion of the femoral component. In some examples, the bearing component can be fixed relative to the tibial component. In other examples, the bearing component can be a mobile bearing component that has at least a portion that can move relative to the tibial component during articulation of the femoral component. In some applications, it may be desirable to retain or reconstruct an anterior cruciate ligament (ACL) and/or a posterior cruciate ligament (PCL).

SUMMARY

This section provides a general summary of the disclosure, and is not a comprehensive disclosure of its full scope or all of its features.

The present teachings provide for a tibial component for implantation at a resected tibia. The tibial component includes a medial tray, a lateral tray, and a connection member between the medial tray and the lateral tray. A first fastener extends from the medial tray to the connection member along a first pivot axle to pivotably couple the medial tray to the connection member. A second fastener is spaced apart from the first fastener and extends from the lateral tray to the connection member along a second pivot axle to pivotably couple the lateral tray to the connection member. The medial tray and the lateral tray are configured to pivot independently of one another with respect to the connection member.

The present teachings further provide for a tibial component for use with a resected tibia. The tibial component includes a medial tray portion having a first inferior bone engaging side adapted to engage a portion of the resected tibia and a first superior bearing engaging side. A lateral tray portion has a second inferior bone engaging side adapted to engage a portion of the resected tibia and a second superior bearing engaging side. A connection portion is between the

2

medial and the lateral tray portions. A first pivot axle is removably coupled to each one of the medial tray portion and the connection portion to pivotably couple the medial tray portion to the connection portion. A second pivot axle is removably coupled to each one of the lateral tray portion and the connection portion to pivotably couple the lateral tray portion to the connection portion. The first and the second pivot axles are configured to move independently of one another.

The present teachings also provide for a tibial component for use with a resected tibia. The tibial component includes a medial tray portion having a first inferior bone engaging side adapted to engage a portion of the resected tibia and a first superior bearing engaging side. A lateral tray portion has a second inferior bone engaging side adapted to engage a portion of the resected tibia and a second superior bearing engaging side. A connection portion is disposed between the medial tray portion and the lateral tray portion. A linkage couples the medial tray portion and the lateral tray portion to the connection portion such that the medial tray portion and the lateral tray portion are pivotable relative to each other to position the medial tray portion and the lateral tray portion at different angles with respect to each other. A first pivot axle is included with the linkage. The first pivot axle is removably coupled to each one of the medial tray portion and the connection portion. A second pivot axle is included with the linkage. The second pivot axle is removably coupled to each one of the lateral tray portion and the connection portion. The first and the second pivot axles are configured to move independently of one another.

Further areas of applicability will become apparent from the description provided herein. The description and specific examples in this summary are intended for purposes of illustration only and are not intended to limit the scope of the present disclosure.

DRAWINGS

The drawings described herein are for illustrative purposes only of selected embodiments and not all possible implementations, and are not intended to limit the scope of the present disclosure.

FIG. 1 is an anterior perspective view of a knee prosthesis assembly that incorporates a pivoting tibial tray according to one example of the present teachings;

FIG. 2 is an anterior perspective view of the pivoting tibial tray of FIG. 1;

FIG. 3 is an exploded perspective view of the knee prosthesis assembly of FIG. 1;

FIG. 4 is a lateral view of the pivoting tibial tray of FIG. 2;

FIG. 5 is a lateral view of the pivoting tibial tray of FIG. 4 and shown with the lateral tray portion pivoted around a pivot axis that extends generally along a medial/lateral direction in an implanted position; and

FIG. 6 is a lateral view of the pivoting tibial tray shown with a lateral bearing and a medial bearing connected to respective lateral and medial tray portions and shown with the lateral tray portion rotated generally posteriorly in an implanted position about the pivot axis.

Corresponding reference numerals indicate corresponding parts throughout the several views of the drawings.

DETAILED DESCRIPTION

Example embodiments will now be described more fully with reference to the accompanying drawings.